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(71) Applicant and

(72) Inventor: NYLESE, Tara [US/US]; 819 Chestnut Court,
Marco Island, FL 34145 (US).

(74) Agents: BEUSSE, James, H. et al.; Beusse Brownlee
Bowdoin & Wolter, P.A., 390 N. Orange Avenue, Suite
2500, Orlando, FL 32801 (US).

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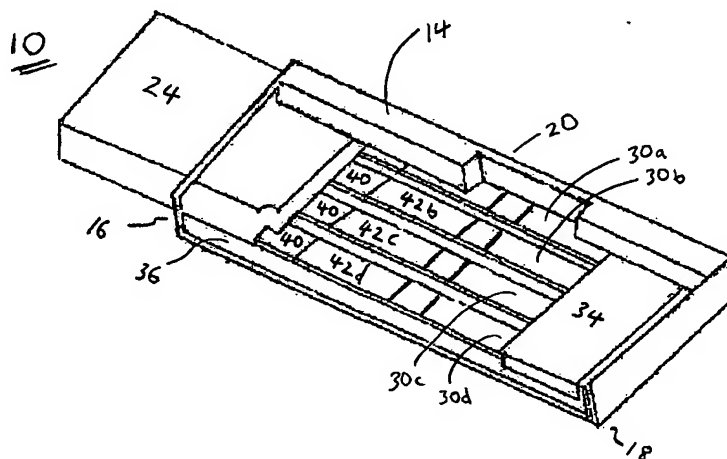
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(54) Title: PORTABLE DIAGNOSTIC DEVICE AND METHOD FOR DETERMINING TEMPORAL VARIATIONS IN CONCENTRATIONS



(57) **Abstract:** A rapid assay concentration device. In one form, the device includes a substrate and a plurality of elongated membranes on the substrate. At least one capture zone is formed in each membrane. Each capture zone is responsive to the presence of a target chemical in the fluid. Capture zones on different membranes have different threshold levels of response to the chemical. In a method for monitoring temporal changes of analyte levels in a source multiple test devices are provided, with each device including a plurality of regions. Each region is responsive at a different sensitivity level to indicate presence of the analyte. A source sample is brought into contact with a first of the test devices to determine whether the source contains a level of analyte sufficient to induce a response thereto in one or more of the test unit regions. A different sample from the source is brought into contact with a second of the test devices to determine whether the source contains a level of analyte sufficient to induce a response thereto in one or more regions of the second test device.